



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Norman H. Bangerter
Governor

Dee C. Hansen
Executive Director

Dianne R. Nielson, Ph.D.
Division Director

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

September 8, 1992

Mr. David I. Hodson
General Manager
Kennecott Corporation
8200 South 9600 West
P.O. Box 311
Bingham Canyon, Utah 84006-0311

David
Dear Mr. Hodson:

Re: Tentative Approval of Permit Revision, Barney's Canyon Mine, Kennecott Corporation, M/035/009, Salt Lake County, Utah

The Division has completed its second review of Kennecott's permit revision for the Barney's Canyon Mine. We received the original permit application on December 19, 1991. Kennecott submitted a draft amendment to the original December 91 submittal on August 10, 1992, and another draft on August 28, 1992. The operator will make all necessary changes to the permit revision document and submit a finalized copy, prior to issuance of the Division's final approval.

The Division hereby grants conditional tentative approval of this permit revision. We will now prepare a public notice and submit it to the appropriate newspaper agencies for publication, therein starting a 30-day public comment period. Once the the public comment period has passed without incident, and Kennecott has satisfied the remaining conditions as outlined in this letter, the Division will be prepared to issue its final approval of this permit revision.

The following review comments are noted plan deficiencies, listed in chronological order, with reference to the specific section of the Minerals Rules. Please prepare your response in the same manner using a similar format.

Page 2
Mr. David Hodson
Barney's Canyon Mine
M/035/009
September 8, 1992

R647-004-107 - Operation Practices

107.4 - Deleterious materials safely remove or isolate

1. Kennecott must address the requirements of The Division of Water Quality (DWQ) regarding the deposition of sulfide ore dumps, at the mine site. Because the time frame for addressing this issue may take more than 30 days, the Division will continue toward final approval. However, this information must be incorporated into the plan revision once approved by DWQ. - HWS
2. Please explain more clearly what will happen with the sulfide ore if it is to remain permanently onsite, instead of being processed. Will the ore be blended and then capped or simply capped in place? The answer to this question may have to wait until Kennecott works out an acceptable plan for temporary or permanent storage of the sulfide ore material onsite with DWQ. The Division will expect Kennecott to address this issue in a timely fashion, and to insert the appropriate language into the plan, once approval is made. The operator might consider addressing this issue, when the complete plan is updated and consolidated (it is anticipated this will be done prior to the end of 1992). - HWS

R647-004-109 - Impact Assessment

109.2 - Wildlife habitat and endangered species

1. The Division is concerned that the operator take steps to prevent wildlife mortalities, resulting from the operation of the cyanide heap leach facilities. Please inform us of any wildlife mortalities that may have occurred to date, as a result of the operation of the cyanide facilities? Also, please describe the current mitigation techniques being used by Kennecott to prevent wildlife mortalities. This information will not be needed for approval of the current revision. However, it should be addressed in the operator's updated and consolidated mining and reclamation plan (MRP), to be submitted later this year. Please insert language in the future consolidated MRP which describes the operation's

Page 3
Mr. David Hodson
Barney's Canyon Mine
M/035/009
September 8, 1992

current mitigation techniques and a commitment to provide an annual summary of any wildlife mortalities in the requisite annual reports. - HWS

R647-004-110 - Reclamation Plan

110.2 - Roads, highwalls, slopes, leach pads, impoundments, drainages, pits, trenches, ponds, drill holes, etc. will be reclaimed

1. Because of the difficulty in reclaiming angle of repose slopes, the Division is hesitant to allow Kennecott to construct the 7200 and 7300 Melco dumps at this slope angle. The Division typically requires a minimum regraded slope angle of 2h:1v to achieve reasonable reclamation success.

The Division and Kennecott have discussed the possibility of a future expansion of the Bingham Pit dumps extending up Dry Fork Canyon. This expansion could encroach upon and/or obliterate a significant portion of the 7200 dump, if it were regraded to a 2h:1v configuration before the Bingham/Dry Fork Canyon dump expansion. Burying the lower portion of the 7200 dump would negate efforts put forth by the operator to regrade and reclaim this slope to a 2h:1v configuration. Because of the steep and confining topographic limitations associated with the Melco 7300 dump, and the less desirable adjacent canyon dumping alternative, the Division will allow this dump to be constructed at the angle of repose.

Although the Division would prefer to see these dump slopes regraded to a 2h:1v angle, we are presently satisfied with Kennecott's technical justification and revegetation proposals to allow these two dumps (7200 & 7300) to be constructed at the angle of repose as proposed.

The Division will require that Kennecott commit to reevaluating the potential of the Bingham/Dry Fork Canyon dump reaching the 6850 level, within a reasonable time frame. The reevaluation should take place within 5 years or at the end of mine life (whichever comes first). If it becomes evident that the Bingham pit dumps will reach this level within a practicable time frame, then the Division will ask that the operator commit to pushing the Melco 7200 dump out to a 2h:1v slope and reclaim it accordingly.

If it is evident, at the end of mine life, that the Bingham dumps will not reach the 6850 level within a reasonable time frame, or never reach that level, reclaiming the dumps at angle of repose will be acceptable given the following condition. Kennecott must prove/demonstrate through its current revegetation proposal, that the Melco 7300 dump (anticipated to be constructed and reseeded by the fall of 1994) can achieve and sustain adequate revegetative success on this type of dump slope. Should the proposed revegetation plan fail, then the Division may require ultimate regrading to a 2h:1 slope, and/or deny all future requests for angle of repose dump/fill slopes.

The Division will require that Kennecott implement the same type of reclamation techniques on these slopes as presently described in the latest version of the plan revision. However, Division and Kennecott staff will work together on upgrading/refining this plan to develop improved variations of the reclamation methodology as proposed for the 7300 dump. - DWH/HWS

2. The Division requests that Kennecott address reclamation of the Melco haul roads (including the new portion to be constructed south of the Melco Pit), with a more detailed explanation of the type of reclamation to be performed. The operator should describe in more detail what techniques are to be applied to the angle of repose fill slopes and the steeper cut slopes. Also explain the removal of culverts and reclamation of the once culverted areas. Deep ripping and roughening of the haul roads should also be addressed in the plan. - HWS

R647-004-112 - Variance

1. The Division will grant Kennecott a variance from rules R647-4-111.6, 7, 12 and 13 (slope reclamation, highwall reclamation, retopsoiling and revegetation success), for the North BC South and Melco pits, as well as for the South BC South pit highwalls which will remain after backfilling. The variance will not apply to any accessible benches wider than 40 feet associated with any of these pits. - HWS

Page 5
Mr. David Hodson
Barney's Canyon Mine
M/035/009
September 8, 1992

2. The Division will grant a variance from rules R647-4-111. 6 and 12 (slope reclamation and retopsoiling) for the outslopes of the Melco dumps (7200 or 7300). However, the operator will be asked to reevaluate the possibility of pushing the Melco 7200 dump out to 2h:1v at the end to mine life. - HWS
3. The operator will be granted a partial variance from rule R647-4-111.13, which addresses revegetation success, for the 7200 and 7300 Melco dumps. The operator has committed to partial revegetation of these dump slopes via the procedure described in the plan. The Division and operator will develop a revegetation standard for the Melco 7300 and 7200 dumps prior to consolidation of the overall MRP. This standard will be incorporated into the consolidated MRP. - HWS
4. The operator will be granted a partial variance from rule R647-4-111.13, which addresses revegetation success, for the cut and fill slopes of the Melco haul road. However, the operator must describe a more detailed method of reclamation in the plan, which addresses these portions of the haul roads. - HWS

R647-004-113 - Surety

The Division has enclosed a copy of the latest (September 4, 1992) Reclamation Contract (FORM MR-RC) which will need to be revised/updated to reflect the latest changes as proposed under this permit revision. A new Reclamation Contract form must be completed and returned along with Kennecott's preferred form of surety. It is our understanding that Kennecott will probably pursue an amendment (rider) to the existing \$2,700,000 surety bond. The updated reclamation surety amount in 1997 dollars totals \$3,020,000 (see revision estimate enclosed). The revised Reclamation Contract form and surety must be received prior to the September 23, 1992 Board Hearing.

Page 6
Mr. David Hodson
Barney's Canyon Mine
M/035/009
September 8, 1992

Thank you for your cooperation in completing this permitting action. Please contact me, or Wayne Hedberg, if you have remaining questions or concerns in this regard.

Sincerely,



Lowell P. Braxton
Associate Director, Mining

jb
Enclosures
cc: Don Ostler, DWQ
Bob Bayer, JBR
Minerals staff (route)
M035009.2